

## INITIAL REVIEW EXPOSURE REPORT

P-09-0291

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Assessor: L. Libelo

Search ( )Y

Focus Date: 4/23/2009

SAT

Health: H

SAT Date: 04/10/09

Eco: M T3

SAT Rep:

Submitter:

Max. PV  
(kg/yr)Manuf.  
Import

Use:

polymerization

Chemical Name:

Trade Name:

Nano:

CAS:

Structure Comments:

Structure:



5 0 0 9 0 0 0 2 8 3 0

## INITIAL REVIEW EXPOSURE REPORT

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## ANALOG DATA FORM

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		RATING		PHOTO	RATING
ANAEROBIC BIODEGRADATION	Ultimate	4		DIRECT	
	Primary			INDIRECT	

Comments:

			AT OX	
HYDROLYSIS	A.		OH	
(pH 7, 25 C)	B.		O3	

Comments:

SORPTION TO SOIL & SEDIMENT	4		
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Comments:

MIGRATION TO GROUND WATER	4		Persist/Bioacc	3/2
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## BIO COMMENT

OECD111(Hydrolysis): t1/2(pH4,7,9 at 50C): >1yr (0%/5d);  
 OECD301B(Mod Sturm CO2 ev): 0%/28d.

	Nano:	MOL WT	FORM
Structure:			
		Log Kow	

Page 2

%

0

Sorp 1

Strip 4

Rem 4

Dest

Ult 4

Prim

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STATE	NEAT: [REDACTED]				EPI ESTIMATIONS		
	MFG: NK - Import						
FORMULA: [REDACTED]		% < 500		[REDACTED]			
MOL WT: [REDACTED]		% < 1000		[REDACTED]			
Submitted		ICB-CRSS		Method/Ref			
MP (C)		[REDACTED]		Exp.		[REDACTED]	
BP (C)		@ 760 torr		[REDACTED]		@ 760 torr	
@ P (torr)							
VP (torr) 0.00				Exp.		[REDACTED]	
S-H2O (g/L)		Dispersible		Use		[REDACTED]	
Log Kow						[REDACTED]	
pH, pKa				Log Koc		2.80	
Light Absorption (nm) <>290				Log BCF		BCF 0.50 3.16	
Solvent:				H (atm m3/mol)		[REDACTED]	
HYDRO t(1/2) @pH7, 25C		337.89 da		Persistence / Bioaccumulation		3/3	
Volatilization (H2O) t(1/2)		River		1000.00 hr		Lake 1000.00 da	
AOP t(1/2) (hr)		OH		O3		Total	
MITI		Linear Prob: -0.09		Nonlinear Prob: 0.00			
BIODEG		Linear Prob: -2.26		Nonlinear Prob: 0.00		Survey Ult: RECAL Survey Prim: MO	
STP (% Removal)		Tot 1.89		Biod 0.09		Ads 1.80 Air: 0.00	
REMOVAL IN WWT/POTW [REDACTED]							
				CATEGORY			
				RATING			
				1 2 3 4			
Sorption				low moderate strong v.strong			
Stripping				extensive moderate low negligible			
Biodegradation		Removal		unknown high moderate negligible			
		Destruction		unknown complete partial			
Comments:							
AEROBIC BIODEGRADATION							
Ultimate				<= days		weeks months > months	
Primary				<= days		weeks months > months	
Comments: OECD 301C(MITI): 0%/28d.							

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				CATEGORY			
			RATING	1	2	3	4
ANAEROBIC BIODEGRADATION	Ultimate			<= days	weeks	months	> months
	Primary			<= days	weeks	months	> months

Comments:

	HYDRO (da)						
HYDROLYSIS	338	A.		<= mins	hours	days	=> months
(t(1/2) @ pH 7, 25 °C)		B.		<= mins	hours	days	=> months

Comments:

SORPTION TO SOIL & SEDIMENT		v.strong	strong	moderate	low
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Comments:

MIGRATION TO GROUND WATER		negl	slow	moderate	rapid
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Comments:

VOLATILIZATION	Rivers (hr)	1000		negl	slow	moderate	rapid
(w/o sediment)	Lakes (da)	1000		negl	slow	moderate	rapid

Comments:

PHOTOLYSIS	A. Direct		negl	slow	moderate	rapid
	B. Indirect		negl	slow	moderate	rapid

Comments:

		AOP t(1/2) hr					
ATMOSPHERIC	A. OH			negl	slow	moderate	rapid
OXIDATION	B. O3			negl	slow	moderate	rapid

Comments:

## INITIAL REVIEW EXPOSURE REPORT (IRExR)

Chemical ID: P090291

Reviewer: Flessner

Results Table: Dose, Concentration, and Days Exceeded Results Summary

Exposure Scenario: Release activity(ies) <sup>2</sup> : exposure calculation(s) <sup>3</sup>	Water						Landfill	Stack Air		Fugitive Air	
	Drinking Water		Fish Ingestion		7Q10 <sup>4</sup> CC=1000 550 µg/l	PDM Days Exceeded # Days	LADD	ADR	LADD	ADR	LADD
	ADR	LADD	ADR	LADD							
	mg/kg/day	mg/kg/day	mg/kg/day	mg/kg/day			mg/kg/day	mg/kg/day	mg/kg/day	mg/kg/day	mg/kg/day
max ADR							---				---
	---	---	---	---			---	---	---	---	---
PDM2	---	---	---	---			---	---	---	---	---
max LADD	---					---					
max ADR, max Acute Eco, PDM, max LADD											
max ADR, max Acute Eco, PDM, max LADD											---

<sup>1</sup> Exposure scenario titles consist of release activity followed by exposure calculation abbreviation.<sup>2</sup> Release activities are from engineering report's Manufacturing (Mfg), Processing (Proc) and Use release activity labels.

Multiple release activities are combined in one exposure scenario if their releases occur at same location.

<sup>3</sup> Exposure calculations are Acute Dose Rate (ADR), Lifetime Average Daily Dose (LADD), and Probabilistic Dilution Model (PDM). There may be one, two, or all three exposure calculations per exposure scenario.

CC is the aquatic concentration of concern.

<sup>4</sup> This column displays concentration values for the 7Q10 streamflow, which is defined as the average streamflow of the 7 consecutive days of lowest flow within a 10 year period.

Remarks:

Fate test recommendations?: (default is NA)

## INITIAL REVIEW EXPOSURE REPORT

Chemical ID: P090291

Assessor: Flessner

## ENVIRONMENTAL RELEASES

Scenario#: 1

Number of Release Sites: 1

Release Activity: [REDACTED] max ADR

Release Description:	WATER	LANDFILL Non-sludge/Sludge	STACK	FUGITIVE
Total Releases:	[REDACTED] (kg/yr)	[REDACTED] (kg/yr)	[REDACTED] (kg/yr)	[REDACTED] (kg/yr)
Non-sludge/Sludge				
Release Days/yr:	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Per Site Release:	[REDACTED] (kg/site/day)	[REDACTED] (kg/site/day)	[REDACTED] (kg/site/day)	[REDACTED] (kg/site/day)

Remarks:

## INITIAL REVIEW EXPOSURE REPORT

CHEMICAL ID: P090291

SITE-SPECIFIC HUMAN AND AQUATIC EXPOSURES TO SURFACE WATER RELEASES: LAKES, BAYS, ESTUARIES, AND OCEANS		
SCENARIO #: 1	RELEASE ACTIVITY: [REDACTED] max ADR	
FACILITY NAME: [REDACTED]		
FACILITY LOCATION: [REDACTED]		
RECEIVING WATER NAME: [REDACTED]		
REACH NUMBER: [REDACTED]	FACILITY ON REACH: [REDACTED]	DISCHARGE TYPE: Direct
NPDES PERMIT #: [REDACTED]	EXPOSED POPULATION: Adult	

WWT REMOVAL (%)	RELEASE DAYS	PLANT FLOW (MLD)	PRETREAT RELEASE (kg/site/day)	POST-TREAT RELEASE (kg/site/day)	BCF (L/kg)
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

AQUATIC EXPOSURE ESTIMATES		
MIXING ZONE	DILUTION FACTOR	WATER CONCENTRATION (ug/L)
ACUTE SCENARIO	1.00	[REDACTED]
CHRONIC SCENARIO	1.00	[REDACTED]

FISH INGESTION EXPOSURE ESTIMATES						
Exposure Units	Results	ASSUMPTIONS				
		ED (years)	AT (years)	BW (kg)	IR (g/day)	
Cancer						
LADD <sub>pot</sub> (mg/kg/day)		30.00	75.00	71.80	6.00	
LADC <sub>pot</sub> (mg/kg)		30.00	75.00	NA	NA	
Acute						
ADR <sub>pot</sub> (mg/kg/day)		NA	1 day	71.80	129.00	

Lakes Comments:

## INITIAL EXPOSURE REVIEW REPORT

Chemical ID: P090291

INHALATION EXPOSURE ESTIMATES (POST-TREATMENT)
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SCENARIO #: 1

RELEASE ACTIVITY [REDACTED] max ADR

RELEASE DESCRIPTION:

METHOD OF CALCULATION: Screen3

EXPOSED POPULATION: Adult

Number of Sites: [REDACTED]

Per Site Fugitive Release:

[REDACTED] kg/site/day

Fugitive Release Days per Year:

[REDACTED] days

% Removal via Fugitive Release:

[REDACTED] %

Total Fugitive Release:

[REDACTED] kg/yr

Max Annual Average Air Concentration  
(Fugitive):[REDACTED]  $\mu\text{g}/\text{m}^3$ Max 24 Hour Average Air  
Concentration(Fugitive):[REDACTED]  $\mu\text{g}/\text{m}^3$ 

Per Site Stack Release:

[REDACTED] kg/site/day

Stack Release Days per Year:

[REDACTED] days

% Removal via Stack Release:

[REDACTED] %

Total Stack Release:

[REDACTED] kg/yr

Max Annual Average Air Concentration (Stack):

[REDACTED]  $\mu\text{g}/\text{m}^3$ 

Max 24 Hour Average Air Concentration (Stack):

[REDACTED]  $\mu\text{g}/\text{m}^3$ 

Exposure Units	Results (Stack)	Results (Fugitive)	ASSUMPTIONS			
			ED (years)	AT (years)	BW (kg)	Inh. Rate (m <sup>3</sup> /hr)
Cancer						
LADD <sub>pot</sub> (mg/kg/day)	██████	██████	30.00	75.00	71.80	0.55
LADC <sub>pot</sub> (mg/m <sup>3</sup> )	██████	██████	30.00	75.00	NA	NA
Acute						
ADR <sub>pot</sub> (mg/kg/day)	██████	██████	NA	1 day	71.80	0.55

Inhalation Comments:



## Stack Parameter Data

Stack Height	10.00	m
Inside Stack Diameter:	0.10	m
Stack Gas Exit Velocity:	0.10	m/sec
Stack Gas Temperature:	293.00	K

## Fugitive Parameter Data

Release Height:	3.00	m
Length of Release Opening:	10.00	m
Width of Release Opening:	10.00	m

## Meteorological and Terrain Information:

Surrounding Land Use:	Rural
Terrain Height:	0.00 m
Distance to Residence of Interest:	100.00 m
Meteorological Class:	Full
Stability Class:	NA
Wind Speed:	NA

## Downwash Information:

Facility Length:	NA m
Facility Width:	NA m
Facility Height:	NA m

## INITIAL REVIEW EXPOSURE REPORT

Chemical ID: P090291

Assessor:

## ENVIRONMENTAL RELEASES

Scenario#:2

Number of Release Sites: [REDACTED]

Release Activity: [REDACTED] PDM1

Release Description:	WATER	LANDFILL Non-sludge/Sludge	STACK	FUGITIVE
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Total Releases:	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	(kg/yr)	(kg/yr)	(kg/yr)	(kg/yr)

## Non-sludge/Sludge

Release Days/yr:	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Per Site Release:	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	(kg/site/day)	(kg/site/day)	(kg/site/day)	(kg/site/day)

Remarks:

## INITIAL REVIEW EXPOSURE REPORT

CHEMICAL ID: P090291

SITE-SPECIFIC HUMAN AND AQUATIC EXPOSURES TO SURFACE WATER RELEASES: LAKES, BAYS, ESTUARIES, AND OCEANS		
SCENARIO #: 2	RELEASE ACTIVITY: [REDACTED] PDM1	
FACILITY NAME: [REDACTED]		
FACILITY LOCATION: [REDACTED]		
RECEIVING WATER NAME: [REDACTED]		
REACH NUMBER: [REDACTED]	FACILITY ON REACH: [REDACTED]	DISCHARGE TYPE: Direct
NPDES PERMIT #: [REDACTED]	EXPOSED POPULATION: Adult	

WWT REMOVAL (%)	RELEASE DAYS	PLANT FLOW (MLD)	PRETREAT RELEASE (kg/site/day)	POST-TREAT RELEASE (kg/site/day)	BCF (L/kg)
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

AQUATIC EXPOSURE ESTIMATES		
MIXING ZONE	DILUTION FACTOR	WATER CONCENTRATION (ug/L)
ACUTE SCENARIO	1.00	[REDACTED]
CHRONIC SCENARIO	1.00	[REDACTED]

FISH INGESTION EXPOSURE ESTIMATES						
Exposure Units	Results	ASSUMPTIONS				
		ED (years)	AT (years)	BW (kg)	IR (g/day)	
		Cancer				
LADD <sub>pot</sub> (mg/kg/day)		30.00	75.00	71.80	6.00	
LADC <sub>pot</sub> (mg/kg)		30.00	75.00	NA	NA	
		Acute				
ADR <sub>pot</sub> (mg/kg/day)		NA	1 day	71.80	129.00	

Lakes Comments:

## INITIAL REVIEW EXPOSURE REPORT

Chemical ID: P090291

Assessor:

## ENVIRONMENTAL RELEASES

Scenario#:3

Number of Release Sites: 1

Release Activity: [REDACTED] PDM2

Release Description:	WATER	LANDFILL Non-sludge/Sludge	STACK	FUGITIVE
Total Releases:	[REDACTED] (kg/yr)	[REDACTED] (kg/yr)	[REDACTED] (kg/yr)	[REDACTED] (kg/yr)

## Non-sludge/Sludge

Release Days/yr:	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Per Site Release:	[REDACTED] (kg/site/day)	[REDACTED] (kg/site/day)	[REDACTED] (kg/site/day)	[REDACTED] (kg/site/day)

Remarks:

## INITIAL REVIEW EXPOSURE REPORT

CHEMICAL ID: P090291

SITE-SPECIFIC HUMAN AND AQUATIC EXPOSURES TO SURFACE WATER RELEASES: LAKES, BAYS, ESTUARIES, AND OCEANS		
SCENARIO #: 3	RELEASE ACTIVITY: [REDACTED] PDM2	
FACILITY NAME: [REDACTED]		
FACILITY LOCATION: [REDACTED]		
RECEIVING WATER NAME: [REDACTED]		
REACH NUMBER: [REDACTED]	FACILITY ON REACH: [REDACTED]	DISCHARGE TYPE: Direct
NPDES PERMIT [REDACTED]	EXPOSED POPULATION: Adult	

WWT REMOVAL (%)	RELEASE DAYS	PLANT FLOW (MLD)	PRETREAT RELEASE (kg/site/day)	POST-TREAT RELEASE (kg/site/day)	BCF (L/kg)
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

AQUATIC EXPOSURE ESTIMATES		
MIXING ZONE	DILUTION FACTOR	WATER CONCENTRATION (ug/L)
ACUTE SCENARIO	1.00	[REDACTED]
CHRONIC SCENARIO	1.00	[REDACTED]

FISH INGESTION EXPOSURE ESTIMATES					
Exposure Units	Results	ASSUMPTIONS			
		ED (years)	AT (years)	BW (kg)	IR (g/day)
		Cancer			
LADD <sub>pot</sub> (mg/kg/day)		30.00	75.00	71.80	6.00
LADC <sub>pot</sub> (mg/kg)		30.00	75.00	NA	NA
		Acute			
ADR <sub>pot</sub> (mg/kg/day)		NA	1 day	71.80	129.00

Lakes Comments:

## INITIAL REVIEW EXPOSURE REPORT

Chemical ID: P090291

Assessor:

## ENVIRONMENTAL RELEASES

Scenario#: 4

Number of Release Sites: 1

Release Activity: [REDACTED] max LADD

Release Description:	WATER	LANDFILL Non-sludge/Sludge	STACK	FUGITIVE
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Total Releases:	[REDACTED] (kg/yr)	[REDACTED] (kg/yr)	[REDACTED] (kg/yr)	[REDACTED] (kg/yr)
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	Non-sludge/Sludge			
Release Days/yr:	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Per Site Release:	[REDACTED] (kg/site/day)	[REDACTED] (kg/site/day)	[REDACTED] (kg/site/day)	[REDACTED] (kg/site/day)

Remarks:

## INITIAL REVIEW EXPOSURE REPORT

CHEMICAL ID: P090291

SITE-SPECIFIC HUMAN AND AQUATIC EXPOSURES TO SURFACE WATER RELEASES: LAKES, BAYS, ESTUARIES, AND OCEANS		
SCENARIO #: 4	RELEASE ACTIVITY: [REDACTED] max LADD	
FACILITY NAME [REDACTED]		
FACILITY LOCATION: [REDACTED]		
RECEIVING WATER NAME: [REDACTED]		
REACH NUMBER: [REDACTED]	FACILITY ON REACH: [REDACTED]	DISCHARGE TYPE: Direct
NPDES PERMIT #: [REDACTED]	EXPOSED POPULATION: Adult	

WWT REMOVAL (%)	RELEASE DAYS	PLANT FLOW (MLD)	PRETREAT. RELEASE (kg/site/day)	POST-TREAT RELEASE (kg/site/day)	BCF (L/kg)
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

AQUATIC EXPOSURE ESTIMATES		
MIXING ZONE	DILUTION FACTOR	WATER CONCENTRATION (ug/L)
ACUTE SCENARIO	1.00	
CHRONIC SCENARIO	1.00	

FISH INGESTION EXPOSURE ESTIMATES					
Exposure Units	Results	ASSUMPTIONS			
		ED (years)	AT (years)	BW (kg)	IR (g/day)
		Cancer			
LADD <sub>pot</sub> (mg/kg/day)		30.00	75.00	71.80	6.00
LADC <sub>pot</sub> (mg/kg)		30.00	75.00	NA	NA
		Acute			
ADR <sub>pot</sub> (mg/kg/day)					

Lakes Comments:

## INITIAL EXPOSURE REVIEW REPORT

Chemical ID: P090291

## DRINKING WATER EXPOSURE ESTIMATES FROM LANDFILL RELEASES

SCENARIO #: 4

ACTIVITY: max LADD

RELEASE DESCRIPTION:

EXPOSED POPULATION: Adult

NUMBER OF SITES	NON-SLUDGE LANDFILL RELEASE AND DAYS OF RELEASE (kg/site/day)/(days)	LANDFILLED SLUDGE <sup>1</sup> AND DAYS OF RELEASE (kg/site/day)/(days)	MIGRATION DESCRIPTOR <sup>2</sup>	ADSORPTION TO WASTEWATER SLUDGE (%)	DRINKING WATER TREATMENT (%)

<sup>1</sup> Landfilled sludge equals the fraction adsorbed to wastewater treatment sludge times the surface water pre-treatment release.

<sup>2</sup> Migration Descriptor

Log Koc

Groundwater Concentration (GWC)  
(mg/L per kg release)

Negligible

no migration

None

Negligible to slow

&gt; 4.5

3.21E-6

Slow

&lt;4.5 to 3.5

2.67E-5

Moderate

&lt;3.5 to 2.5

5.95E-5

Rapid

&lt;2.5

7.55E-5

Exposure Units	Results	ASSUMPTIONS			
		ED (years)	AT (years)	BW (kg)	IR (L/day)
Cancer					
LADD <sub>pot</sub> (mg/kg/day)		30.00	75.00	71.80	1.40
LADC <sub>pot</sub> (mg/L)		30.00	75.00	NA	NA

REMARKS:



## INITIAL EXPOSURE REVIEW REPORT

Chemical ID: P090291

INHALATION EXPOSURE ESTIMATES (POST-TREATMENT)
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SCENARIO #: 4

RELEASE ACTIVITY [REDACTED] max LADD

RELEASE DESCRIPTION:

METHOD OF CALCULATION: Screen3

EXPOSED POPULATION: Adult

Number of Sites: [REDACTED]

Per Site Fugitive Release: [REDACTED] kg/site/day

Fugitive Release Days per Year: [REDACTED] days

% Removal via Fugitive Release: [REDACTED] %

Total Fugitive Release: [REDACTED] kg/yr

Max Annual Average Air Concentration (Fugitive): [REDACTED]  $\mu\text{g}/\text{m}^3$ Max 24 Hour Average Air Concentration(Fugitive): [REDACTED]  $\mu\text{g}/\text{m}^3$ 

Per Site Stack Release: [REDACTED] kg/site/day

Stack Release Days per Year: [REDACTED] days

% Removal via Stack Release: [REDACTED] %

Total Stack Release: [REDACTED] kg/yr

Max Annual Average Air Concentration (Stack): [REDACTED]  $\mu\text{g}/\text{m}^3$ Max 24 Hour Average Air Concentration (Stack): [REDACTED]  $\mu\text{g}/\text{m}^3$ 

Exposure Units	Results (Stack)	Results (Fugitive)	ASSUMPTIONS			
			ED (years)	AT (years)	BW (kg)	Inh. Rate (m <sup>3</sup> /hr)
Cancer						
LADD <sub>pot</sub> (mg/kg/day)		4.49E-03	30.00	75.00	71.80	0.55
LADC <sub>pot</sub> (mg/m <sup>3</sup> )		2.44E-02	30.00	75.00	NA	NA
Acute						
ADR <sub>pot</sub> (mg/kg/day)						

Inhalation Comments:

## Stack Parameter Data

Stack Height	10.00	m
Inside Stack Diameter:	0.10	m
Stack Gas Exit Velocity:	0.10	m/sec
Stack Gas Temperature:	293.00	K

## Fugitive Parameter Data

Release Height:	3.00	m
Length of Release Opening:	10.00	m
Width of Release Opening:	10.00	m

## Meteorological and Terrain Information:

Surrounding Land Use:	Rural
Terrain Height:	0.00 m
Distance to Residence of Interest:	100.00 m
Meteorological Class:	Full
Stability Class:	NA
Wind Speed:	NA

## Downwash Information:

Facility Length:	NA m
Facility Width:	NA m
Facility Height:	NA m

## INITIAL REVIEW EXPOSURE REPORT

Chemical ID: P090291

Assessor:

## ENVIRONMENTAL RELEASES

Scenario#:5

Number of Release Sites: [REDACTED]

Release Activity: [REDACTED] max ADR, PDM, max LADD

Release Description:	WATER	LANDFILL Non-sludge/Sludge	STACK	FUGITIVE
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Total Releases:	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	(kg/yr)	(kg/yr)	(kg/yr)	(kg/yr)

## Non-sludge/Sludge

Release Days/yr:	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Per Site Release:	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	(kg/site/day)	(kg/site/day)	(kg/site/day)	(kg/site/day)

Remarks:

## INITIAL REVIEW EXPOSURE REPORT

Chemical ID: P090291

## SIC-CODE BASED HUMAN AND AQUATIC EXPOSURES TO SURFACE WATER RELEASES

SCENARIO #: 5

Number of Sites: [REDACTED]

RELEASE ACTIVITY [REDACTED]  
max ADR, PDM, max LADD

SIC-CODE DESCRIPTION: [REDACTED]

SIC-CODE (S) [REDACTED]

EXPOSED POPULATION: Adult

WWT REMOVAL (%)	RELEASE DAYS	PRETREATMENT RELEASE (kg/site/day)	POSTTREATMENT RELEASE (kg/site/day)	DWT (%)	BCF (L/kg)
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

## AQUATIC EXPOSURE ESTIMATES - SURFACE WATER

PLANT TYPE	% ILE FACILITY	STREAM FLOW (MLD)				STREAM CONC. (µg/l)			
		Harmonic Mean	30Q5	7Q10	1Q10	Harmonic Mean	30Q5	7Q10	1Q10
ALL	50	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]			
ALL	10	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]				

## DRINKING WATER AND FISH INGESTION EXPOSURE ESTIMATES

Exposure Units	Drinking Water Results		Drinking Water Units	Fish Ingestion Results		Fish Ingestion Units
	50%	10%		50%	10%	
Cancer						
LADD <sub>pot</sub>			mg/kg/day			mg/kg/day
LADC <sub>pot</sub>			mg/L			mg/kg
Acute						
ADR <sub>pot</sub>			mg/kg/day			mg/kg/day

SIC Code Comments:

## INITIAL REVIEW EXPOSURE REPORT

Chemical ID: P090291

## SIC CODE EXPOSURES TO SURFACE WATER RELEASES

SCENARIO #: 5

RELEASE ACTIVITY: max ADR, PDM, max LADD

SIC CODE DESCRIPTION:

ASSOCIATED SIC CODES:

## SIC CODE RESULTS

COC (µg/L)	Percent of Year COC Exceeded	Number of Days COC Exceeded	Release days/year	Loading (kg/site/day)	Waste Water Treatment (%)	High/Avg Analysis
1000.00						
550.00						

## INITIAL EXPOSURE REVIEW REPORT

Chemical ID: P090291

## DRINKING WATER EXPOSURE ESTIMATES FROM LANDFILL RELEASES

SCENARIO #: 5

ACTIVITY: Use 1: max ADR, PDM, max LADD

RELEASE DESCRIPTION:

EXPOSED POPULATION: Adult

NUMBER OF SITES	NON-SLUDGE LANDFILL RELEASE AND DAYS OF RELEASE (kg/site/day)/(days)	LANDFILLED SLUDGE <sup>1</sup> AND DAYS OF RELEASE (kg/site/day)/(days)	MIGRATION DESCRIPTOR <sup>2</sup>	ADSORPTION TO WASTEWATER SLUDGE (%)	DRINKING WATER TREATMENT (%)
1	1	1	1	1	1

<sup>1</sup> Landfilled sludge equals the fraction adsorbed to wastewater treatment sludge times the surface water pre-treatment release.

<sup>2</sup> Migration Descriptor	Log K <sub>oc</sub>	Groundwater Concentration (GWC) (mg/L per kg release)
Negligible	no migration	None
Negligible to slow	> 4.5	3.21E-6
Slow	<4.5 to 3.5	2.67E-5
Moderate	<3.5 to 2.5	5.95E-5
Rapid	<2.5	7.55E-5

Exposure Units	Results	ASSUMPTIONS			
		ED (years)	AT (years)	BW (kg)	IR (L/day)
Cancer					
LADD <sub>pot</sub> (mg/kg/day)		30.00	75.00	71.80	1.40
LADC <sub>pot</sub> (mg/L)		30.00	75.00	NA	NA

REMARKS:

## INITIAL EXPOSURE REVIEW REPORT

Chemical ID: P090291

INHALATION EXPOSURE ESTIMATES (POST-TREATMENT)
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SCENARIO #: 5

RELEASE ACTIVITY [REDACTED] ADR, PDM, max LADD

RELEASE DESCRIPTION:

METHOD OF CALCULATION: Screen3

EXPOSED POPULATION: Adult

Number of Sites: [REDACTED]

Per Site Fugitive Release: [REDACTED] kg/site/day

Fugitive Release Days per Year: [REDACTED] days

% Removal via Fugitive Release: [REDACTED] %

Total Fugitive Release: [REDACTED] kg/yr

Max Annual Average Air Concentration (Fugitive): [REDACTED]  $\mu\text{g}/\text{m}^3$ Max 24 Hour Average Air Concentration(Fugitive): [REDACTED]  $\mu\text{g}/\text{m}^3$ 

Per Site Stack Release: [REDACTED] kg/site/day

Stack Release Days per Year: [REDACTED] days

% Removal via Stack Release: [REDACTED] %

Total Stack Release: [REDACTED] kg/yr

Max Annual Average Air Concentration (Stack): [REDACTED]  $\mu\text{g}/\text{m}^3$ Max 24 Hour Average Air Concentration (Stack): [REDACTED]  $\mu\text{g}/\text{m}^3$ 

Exposure Units	Results (Stack)	Results (Fugitive)	ASSUMPTIONS			
			ED (years)	AT (years)	BW (kg)	Inh. Rate (m <sup>3</sup> /hr)
Cancer						
LADD <sub>pot</sub> (mg/kg/day)			30.00	75.00	71.80	0.55
LADC <sub>pot</sub> (mg/m <sup>3</sup> )			30.00	75.00	NA	NA
Acute						
ADR <sub>pot</sub> (mg/kg/day)			NA	1 day	71.80	0.55

Inhalation Comments:

## Stack Parameter Data

Stack Height	10.00	m
Inside Stack Diameter:	0.10	m
Stack Gas Exit Velocity:	0.10	m/sec
Stack Gas Temperature:	293.00	K

## Fugitive Parameter Data

Release Height:	3.00	m
Length of Release Opening:	10.00	m
Width of Release Opening:	10.00	m

## Meteorological and Terrain Information:

Surrounding Land Use:	Rural
Terrain Height:	0.00 m
Distance to Residence of Interest:	100.00 m
Meteorological Class:	Full
Stability Class:	NA
Wind Speed:	NA

## Downwash Information:

Facility Length:	NA m
Facility Width:	NA m
Facility Height:	NA m



## INITIAL REVIEW EXPOSURE REPORT

Chemical ID: P090291

Assessor:

## ENVIRONMENTAL RELEASES

Scenario#:6

Number of Release Sites: [REDACTED]

Release Activity: [REDACTED] max ADR, PDM, max LADD

Release Description:	WATER	LANDFILL Non-sludge/Sludge	STACK	FUGITIVE
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Total Releases:	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	(kg/yr)	(kg/yr)	(kg/yr)	(kg/yr)

## Non-sludge/Sludge

Release Days/yr:	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Per Site Release:	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	(kg/site/day)	(kg/site/day)	(kg/site/day)	(kg/site/day)

Remarks:

## INITIAL REVIEW EXPOSURE REPORT

Chemical ID: P090291

## SIC-CODE BASED HUMAN AND AQUATIC EXPOSURES TO SURFACE WATER RELEASES

SCENARIO #: 6

Number of Sites: [REDACTED]

RELEASE ACTIVITY [REDACTED]  
max ADR, PDM, max LADD

SIC-CODE DESCRIPTION: [REDACTED]

SIC-CODE (S): [REDACTED]

EXPOSED POPULATION: Adult

WWT REMOVAL (%)	RELEASE DAYS	PRETREATMENT RELEASE (kg/site/day)	POSTTREATMENT RELEASE (kg/site/day)	DWT (%)	BCF (L/kg)
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

## AQUATIC EXPOSURE ESTIMATES - SURFACE WATER

PLANT TYPE	% ILE FACILITY	STREAM FLOW (MLD)				STREAM CONC. (µg/l)			
		Harmonic Mean	30Q5	7Q10	1Q10	Harmonic Mean	30Q5	7Q10	1Q10
ALL	50	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]			
ALL	10	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]				

## DRINKING WATER AND FISH INGESTION EXPOSURE ESTIMATES

Exposure Units	Drinking Water Results		Drinking Water Units	Fish Ingestion Results		Fish Ingestion Units	
	50%	10%		50%	10%		
Cancer							
LADD <sub>pot</sub>			mg/kg/day			mg/kg/day	
LADC <sub>pot</sub>			mg/L			mg/kg	
			Acute				
ADR <sub>pot</sub>			mg/kg/day			mg/kg/day	

SIC Code Comments:

## INITIAL REVIEW EXPOSURE REPORT

Chemical ID: P090291

## SIC CODE EXPOSURES TO SURFACE WATER RELEASES

SCENARIO #: 6

RELEASE ACTIVITY: [REDACTED] max ADR, PDM, max LADD

SIC CODE DESCRIPTION: [REDACTED]

ASSOCIATED SIC CODES: [REDACTED]

## SIC CODE RESULTS

COC (µg/L)	Percent of Year COC Exceeded	Number of Days COC Exceeded	Release days/year	Loading (kg/site/day)	Waste Water Treatment (%)	High/Avg Analysis
1000.00	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
550.00	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

## INITIAL EXPOSURE REVIEW REPORT

Chemical ID: P090291

## DRINKING WATER EXPOSURE ESTIMATES FROM LANDFILL RELEASES

SCENARIO #: 6

**ACTIVITY:** [REDACTED] max ADR, PDM, max LADD

RELEASE DESCRIPTION:

EXPOSED POPULATION: Adult

NUMBER OF SITES	NON-SLUDGE LANDFILL RELEASE AND DAYS OF RELEASE (kg/site/day)/(days)	LANDFILLED SLUDGE <sup>1</sup> AND DAYS OF RELEASE (kg/site/day)/(days)	MIGRATION DESCRIPTOR <sup>2</sup>	ADSORPTION TO WASTEWATER SLUDGE (%)	DRINKING WATER TREATMENT (%)
1	1	1	1	1	1

<sup>1</sup> Landfilled sludge equals the fraction adsorbed to wastewater treatment sludge times the surface water pre-treatment release.

2 Migration Descriptor	Log Koc	Groundwater Concentration (GWC) (mg/L per kg release)
Negligible	no migration	None
Negligible to slow	> 4.5	3.21E-6
Slow	<4.5 to 3.5	2.67E-5
Moderate	<3.5 to 2.5	5.95E-5
Rapid	<2.5	7.55E-5

Exposure Units	Results	ASSUMPTIONS			
		ED (years)	AT (years)	BW <sup>pot</sup> (kg)	IR (L/day)
Cancer					
LADD <sub>pot</sub> (mg/kg/day)	██████	30.00	75.00	71.80	1.40
LADC <sub>pot</sub> (mg/L)	██████	30.00	75.00	NA	NA

REMARKS:

## INITIAL EXPOSURE REVIEW REPORT

Chemical ID: P090291

<b>INHALATION EXPOSURE ESTIMATES (POST-TREATMENT)</b>
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SCENARIO #: 6

RELEASE ACTIVITY [REDACTED] max ADR, PDM, max LADD

RELEASE DESCRIPTION:

METHOD OF CALCULATION: Screen3

EXPOSED POPULATION: Adult

Number of Sites: [REDACTED]

Per Site Fugitive Release:

[REDACTED] kg/site/day

Fugitive Release Days per Year:

[REDACTED] days

% Removal via Fugitive Release:

[REDACTED] %

Total Fugitive Release:

[REDACTED] kg/yr

Max Annual Average Air Concentration  
(Fugitive):[REDACTED]  $\mu\text{g}/\text{m}^3$ Max 24 Hour Average Air  
Concentration(Fugitive):[REDACTED]  $\mu\text{g}/\text{m}^3$ 

Per Site Stack Release:

[REDACTED] kg/site/day

Stack Release Days per Year:

[REDACTED] days

% Removal via Stack Release:

[REDACTED] %

Total Stack Release:

[REDACTED] kg/yr

Max Annual Average Air Concentration (Stack):

[REDACTED]  $\mu\text{g}/\text{m}^3$ 

Max 24 Hour Average Air Concentration (Stack):

[REDACTED]  $\mu\text{g}/\text{m}^3$ 

Exposure Units	Results (Stack)	Results (Fugitive)	ASSUMPTIONS			
			ED (years)	AT (years)	BW (kg)	Inh. Rate (m <sup>3</sup> /hr)
Cancer						
LADD <sub>pot</sub> (mg/kg/day)			30.00	75.00	71.80	0.55
LADC <sub>pot</sub> (mg/m <sup>3</sup> )			30.00	75.00	NA	NA
Acute						
ADR <sub>pot</sub> (mg/kg/day)			NA	1 day	71.80	0.55

Inhalation Comments:

## Stack Parameter Data

Stack Height	10.00	m
Inside Stack Diameter:	0.10	m
Stack Gas Exit Velocity:	0.10	m/sec
Stack Gas Temperature:	293.00	K

## Fugitive Parameter Data

Release Height:	N/A
Length of Release Opening:	N/A
Width of Release Opening:	N/A

## Meteorological and Terrain Information:

Surrounding Land Use:	Rural
Terrain Height:	0.00 m
Distance to Residence of Interest:	100.00 m
Meteorological Class:	Full
Stability Class:	NA
Wind Speed:	NA

## Downwash Information:

Facility Length:	NA m
Facility Width:	NA m
Facility Height:	NA m

## LEGEND FOR NEW CHEMICALS EXPOSURE REPORT

This new chemicals exposure report was prepared by the Exposure Assessment Branch (EAB) of the Economics, Exposure and Technology Division, Office of Pollution Prevention and Toxics, USEPA.

The goals of these reports are to calculate conservative (protective) estimates of exposure endpoints for consumers, the general population, and the environment.

For each exposure scenario to industrial releases, the following three endpoints are calculated:

- (1) maximum possible acute concentrations and doses
- (2) maximum possible chronic concentrations and doses
- (3) for water releases  $\geq 20$  days, the probability of exceedence of the aquatic concentration of concern

These endpoints are identified by abbreviations on the Release Activity line, e.g., (1) **max ADR**, (2) **max LADD**, (3) **max PDM**. Depending on the release inputs, these endpoints may be calculated and presented on the same page or different pages. That is, a release activity ID of *mfg; max ADR, max PDM, max LADD* indicates that all the exposure endpoints were calculated from common manufacturing release values; conversely, a release activity ID of *mfg & proc; max ADR* indicates that only the maximum acute exposure values were calculated for manufacturing and processing releases that occurred at the same site.

For each consumer product use exposure scenario, whether exposure is to the user directly or to the general population/environment, the maximum exposure values are calculated and presented together.

In addition to the exposure values above, EPA policy directs that exposure and release values be compared to criteria threshold values for Exposure-based and PBT Exposure-based cases.

Exposure-based (YX) cases (those with  $\geq 100,000$  kg/yr production volume)

Criteria are exceeded under the following conditions:

- Presence in consumer product with likely exposure
- $\geq 3\text{E-}3$  mg/kg/d exposure via air, fish ingestion or drinking water
- $\geq 10,000$  kg/yr release to environment (post-treatment)
- $\geq 1,000$  kg/yr release to water (post-treatment)

Persistent, Bioaccumulative, Toxic (PBT) chemicals of P2B2 rating or higher and production volume  $\geq 20,000$  kg/yr

Criteria are exceeded as for YX cases, with the following differences:

- $\geq 2,000$  kg/yr release to environment (post-treatment)
- $\geq 200$  kg/yr release to water (post-treatment)

**Bolding** rules in the Report: Values for endpoints above that are also health or eco concerns are bolded.